



HIGHLAND CATTLE.

Charles Reid

The Photographic Times

VOLUME XLI

APRIL 1909

NUMBER 4

AN IDYL OF THE MAPLE SUGAR CAMP

BY W. I. LINCOLN ADAMS.



THE days are growing longer and the receding snow lingers now only in the shelter of the woods or in the shady hollows of the fields. The cheerful caroling of the happy song-sparrow is heard once more, occasionally accompanied by the briefer, more timid note of the mating blue-bird; and, as the shadows lengthen, we are thrilled by the inspiring robin's call.

"When robins call in twilights cool:

What is it we await?

Who lingers and is late?

What strange unrest, what yearning stirs us all

When willows green, when robins call."

Glistening sap buckets sparkle again in the mellow April Sunshine through the leafless maple groves on the hillsides; and generous nature, o'er-filling with her perennial bounty, lovingly overflows in crystalline drops of delicious Spring sweetness.

Lusty farmer boys are merrily urging onward their lumbering ox-teams through the sugar orchards, collecting in their huge gathering tanks the rapidly filling sap, while their elders attend to the boiling and sugaring processes within the camp.

Here is usually gathered a merry company, for young and old alike find delight in this annually returning first occupation of Spring. Clouds of fragrant vapors arise from the boiling evaporating tanks like grateful incense returning to the heavens whence they come; while at night, the flaming sparks from the furnace beneath fly upward through the chimneys and glow in the dissolving mists above like tiny golden stars.

The crystalline Hills on the eastern horizon glow faintly roseate in the waning light of the evening, growing more radiant as the sun settles lower, until the tender pearl, pink and rose-tinted summits bloom richly crimson in the passionate twilight. Then they fade, as the flowers do, to a deep, sad purple, akin to the deepening shades of the darkening sky; and their outlines at last are entirely lost to view, like visions of the Celestial Hills which disappear as we waken from our happy dreams.

PHOTOGRAPHING IN THE MAPLE SUGAR ORCHARD.

BY W. I. LINCOLN ADAMS.

With Illustrations by the Author.

THE annual early spring industry of northern New Hampshire, of making the delicious maple syrup and sugar, possesses so many charms in itself that the camera is obliged to divide its attention with the attractions of sugar making.

On the other hand, the sugar orchard is so full of picturesque subjects for the camera, that one is always glad to have it along, with a good supply of plates or films.

Personally I prefer the former for this work, as I do, indeed, for nearly all other photographic usage, and generally use a tripod with my camera.

During the sugar season there is so much snow on the ground that contrasts are very pronounced, and hard, cold effects are easy to obtain. I therefore use a small diaphragm ($f/32$) and give rather a liberal exposure, say from half to a full second, and develop slowly, with a diluted pyro developer. This enables me to control development and get just about the effect that I desire for any particular picture.



GATHERING SAP.



DELIVERING SAP AT THE SUGAR HOUSE.

The accompanying illustrations were made with a four by five hand camera on the afternoon of the last day of March in the sugar orchard of my farms in northern New Hampshire. They may all be said to be typical of the sugar bush and characteristic of New Hampshire scenes at this interesting time of the year, before the regular spring occupations of the country begin.

Everything in Nature as reproduced by the camera now is wintry in aspect, though the air is balmy and the early spring birds are beginning to make themselves heard.

There is absolutely no foliage now, not even buds, and the colors of nature are dark brown and green, black and white. A very little later New Hampshire will present as varied hues as the more brilliant leafage of Autumn, though softer and more subdued, of course.

There will soon be the most delicate greens and tender yellows. The tones of the red maple are rather dull in quality, but rich; while the "rock," or sugar maple proper, presents a decidedly greenish yellow appearance in its first spring foliage.

Even now, before the earliest foliage has appeared on the forest trees, there is considerable variety of tone in the various shades of green on the prolific coniferous family, from the pale, almost gray-green of the larch, to the deep bottle-greens of the spruces and hemlocks. These varying shades of green against a snow-covered hillside, with a deep blue sky overhead, make very pleasing pictures in nature, albeit difficult to successfully reproduce in one's photographs.



READY TO START AGAIN.

The initial letter illustration shows the "gathering" party about to start for the grove, with the huge gathering tank adjusted to the rude sled.

The next picture shows the men in the sugar "orchard" itself gathering the sap from the buckets on the trees and emptying them into the gathering tank. The sun is in front of the camera in this picture, which throws the shadows on the snow toward the beholder in rather a pleasing manner, though it leaves the faces of the men and boys in shadow and therefore indistinct.

The next illustration shows the return to the sugar camp, where the men are emptying the sap from the gathering tank into the large "storage" tank from which in turn it descends by gravity to the "evaporator" within the sugar house itself, where it is boiled until it becomes syrup and sugar.

The last picture brings us around again in front of the sugar house, where we started from. It shows the gathering sled about to start on its rounds through the maple grove again for another load of sap. In the meantime the fire has been started under "evaporator," and the fragrant steam from the boiling sap may be seen issuing from the ventilators on top of the house in light mists. Sometimes the entire camp is enveloped in this filmy, fleecy cloud, very beautiful to see, but quite difficult to photograph.

The attractions of the sugar making itself, suggested in the opening paragraph of these notes, now prove too much for the camera, and the photographer lays his outfit one side for the time being, and goes within the camp, there to assist in the pleasant work of making the delicious syrup and sugar.

A PROPHECY OF SPRING



Sing! Bluebird, bring
Prophecy of Spring;
Summer skies upon thy wing,
A welcome offering.

So! Willow, blow
Blossoms soft as snow;
Summer's green will now be seen
On tender leaves between.

Soon the forest rue
Will be peeping through
Sunny banks beside the stream,
Where woodland fairies dream.



THE MONTHLY COMPETITION.



THE entries for this month's competition, while fewer in quantity have made up in quality, though we fear some of them will suffer in the reproduction.

"Home, Sweet Home," is an alluring title and should have brought forth a heartier response from our readers, but it seems to be the fate of all special competitions to scare off the majority of the usual competitors. There are several more special competitions scheduled for the year and we wish you would look them over and come out strong. These special competitions were introduced at the instance of a number of our readers and, strange to say, not one of them is represented by an entry in this event.

The First Award goes to a steady consistent competitor, Mr. F. E. Bronson, for his entry, "Fond Memories of Home, Sweet Home." The old gentleman seated before the blaze in evening comfort surely bears out the title, and is an excellent pictorial effort as well (only we wish he had on slippers). The lighting of the face is particularly good, and the pose suggestive of ease and



FOND MEMORIES OF HOME, SWEET HOME.

(First Award)

F. E. Bronson.



HOME, SWEET HOME.

(Second Award.)

John J. Reilly.

comfort. Data: negative made in October, 1 P. M., good light, 2 seconds exposure $f/5.6$. Cramer Inst. Iso. plate, enlarged on Royal bromide paper.

The second Award goes to John J. Reilly for his charming little family group, in every respect carrying out the title of "Home, Sweet Home." The posing and arrangement of this little group are most excellent, and hold the attention firmly at the center of interest, King Baby. The little framed print on the wall is a bit distracting, but serves its purpose in balancing the composition, would suggest toning it down a few shades so as to hold the interest on the baby's face. Data: flashlight exposure, two No. 1 Eastman Flash sheets, R. R. lens, stop 16, made on Eastman N. C. film, tank developed, and printed on Angelo Sepia platinum.

The First Honorable Mention was awarded to Dr. A. R. Benedict. Doctor Benedict's picture is a bit out of the ordinary, and carries its full quota of home comfort and cheer, the lights shining from the window, telling plainly of the comforts within. Data: negative made in February, 8 P. M., full moonlight, 15 minutes exposure, stop U. S. 4, Eastman N. C. film, R. R. lens, printed on Cyko paper.

The Second Honorable Mention went to Edgar S. Gage, for his rather ambitious flashlight study. Mr. Gage apologizes for the lack of detail in the upper left hand corner and states that he is still engaged in working up the negative. This ingle nook picture demonstrates the possibilities for unusual pic-

*HOME, SWEET HOME.*

(Second Honorable Mention.)

Edgar S. Gage.

tures in most any home and we are glad to have the opportunity of reproducing it. Data: negative made in September, Seed Ortho plate exposed by light of one large Eastman flash sheet, developed with pyro, and enlarged on P. M. C. bromide.

The Third Honorable Mention and final award in this month's competition goes to Miles Chisholm. Note how he has made the most of a comparatively uninteresting foreground, making use of the winding path and shadows to create relief and to separate the masses into balancing parts. Data: negative made in September bright light, "bulb" exposure, Cramer plate, tank developed, and enlarged on Mirmont bromide paper.

The May competition is a general one with the regular and novice classes. Don't overlook the special Advertising Competition for June.



METOL POISONING.

BY NATHAN T. BEERS., M. D.

Attending Dermatologist to the Methodist Episcopal Hospital and the Swedish Hospital, Brooklyn, N. Y.

ONE does not appreciate the potency of this popular chemical until one has suffered a severe attack of metol poisoning. It was not until I had suffered two minor attacks and one very severe one that I gave my attention to the study of the disease. On looking up the medical literature on the subject I found but one case reported to the scientific (medical) world and this was not a typical case by any means. It seems rather surprising that the affection has escaped the attention of the medical profession, since among professional, and even amateur photographers, metol poisoning has been recognized for many years.

Metol, or monomethylparamidophenol sulphate, is a synthetic compound which comes to us in the form of a white, crystalline powder. It is esteemed by the photographer mainly through its rapidity of action, and is one of the component elements in the majority of ready-mixed developers sold to the amateur to-day.



HOME, SWEET HOME.

(First Honorable Mention.)

Dr. A. R. Benedict.

Previous to the introduction of the snapshot camera and the simplification of the processes used in photography, the physician was seldom called upon to consider the effects produced upon the skin through contact with solutions containing metol. But to-day, when even the children compete with their elders for photographic honors, we are constantly called upon to observe and to treat certain conditions of the skin, usually of the hands, which may be traced readily to metol as the cause.

Many professional photographers whose hands are constantly bathed in solutions of metol and who suffer no ill effects therefrom, are wont to scoff at the suggestion of poisoning and allege for themselves a personal immunity. They believe that individual susceptibility or idiosyncrasy is primarily responsible. While the professional's exposure to the action of the chemical is immensely greater than the amateur's, we must bear in mind that his hands are almost constantly in water, thereby diluting the metol which is taken into the surface of the skin. Then again, the skin of the professional's hands is much toughened and thickened by constant bathing in water and solutions of pyro, alum, etc., while the amateur's skin is more delicate and he is inclined to be more careless in using the solutions. As a matter of fact, the worst cases which I have been called upon to treat have been in "old hands" who have always considered themselves immune. I remember one case especially which was very interesting, about a year ago. I was speaking to an old professional concerning the dangers in using the chemical. He laughed at my fears and assured me that he had used metol constantly in his studio for fourteen years. Three months later he was laid up for several weeks with a very severe attack and has since abandoned metol for amidol.

In order to further disprove the theory of immunity I applied a cotton-pad wetted with a normal solution of metol to the soft skin of the forearms of two of my professional friends who considered themselves immune. Within forty-eight hours both gentlemen complained of burning and itching and exhibited circumscribed areas of redness at the site of application. In one case the dermatitis (inflammation of the skin) was typical and went on to desquamation (peeling); the other soon faded and gave no further symptoms. Before pronouncing ourselves too positively, however, on the subject of a possible immunity, it remains for us to make many tests of this and other sorts.

Of one point I am fully satisfied: the disease is not due to a general systemic absorption of the drug resulting in repeated attacks. The disease is a true, irritative inflammation of the skin such as we often see from other causes and runs a regular course finishing with a peeling of the skin and rapid healing. For repeated attacks we must either blame metol, if used again, or acid hypo, which to many skins is very irritating, especially where there exists some open wound or scratch. And speaking of open wounds reminds me that the worst cases which I have been called upon to treat have been those in which the patients give a history of having had hang-nails or open wounds of the fingers during the use of the metol solution. Through these small breaks in the skin the chemical has an opportunity of irritating the deeper and more tender tissues and the resulting inflammation, although limited to these spots, is very intractable and annoying.

In order to make myself perfectly clear on the pathology of this disease I wish to state that, in my opinion, the drug is not absorbed into the general cir-



HOME, SWEET HOME.

(Third Honorable Mention.)

Miles C. Chisholm.

culatation or lymphatic system, as is generally supposed. I have observed and treated over a hundred cases in my office and clinic and as yet have not seen one case in which fever was present or any enlargement of the glands noticed. Nor have I seen areas of the skin on other parts of the body than the hands affected without being able to demonstrate contact with the solution either directly, or indirectly through towels, etc. The disease is neither contagious, infectious, or auto-inoculable. That is, it cannot be spread to other parts or other persons through contact. I believe that it is always limited in extent exactly to those parts of the body which come in contact with the solution. I have heard of several cases, through photographers, in which the whole surface of the body had been involved and "running sores" had broken out; but investigation almost invariably uncovered some other disease accompanying the metol poisoning or being mistaken for it. Of five cases investigated, two were syphilitic, two psoriatic, and the other a true pustular eczema.

I do not state that it is impossible for metol to be absorbed and a condition of general poisoning ensue, but I think such an event unlikely. A fairly wide experience in handling this disease, and the habit which the disease has of limiting itself to certain well defined areas, the absence of fever and other general symptoms of absorption; all of these lead me to this conclusion. When a physician sits down to write a scientific paper he must stick to facts, he must abide by his experience alone; and if he draws conclusions, they must be founded entirely upon his observations and not on hearsay.

I have seen several cases in which the face was involved to a slight degree, but I have always been able to trace the cause to the darkroom towel. Unhappily, one attack predisposes to another. Two of my friends in the camera club are forced to provide their own trays, towels, and graduates since the presence of the least amount of metol on these utensils serves to start them off again on another attack from their old enemy.

I shall not attempt to go too deeply into a description of the disease since such a course would involve the use of words and phrases unfamiliar to the lay ear. Metol poisoning may be roughly divided into two classes; the simple, superficial, and the deep or chronic form. In the first, we observe only a slight inflammation of the outer layers of the skin, little vesicles (blisters) form and rupture accompanied by various degrees of burning and itching, and then peeling starts. These symptoms soon subside and the patient recovers rapidly, the skin resuming its normal appearance within a few days, and without treatment. If one persists in using the solution after this warning or uses the solution when there are cracks, cuts, or hangnails about the finger-ends, the deeper form soon announces itself by burning, swelling, itching, and the formation of tiny vesicles which soon rupture and discharge serum, clear and straw colored in appearance. The skin is soon shed from these areas and denuded surfaces heal and break down alternately for weeks and months unless promptly and properly treated. And even the best of care makes little difference in some cases. Bathing in water or any solution seems to make things worse, and acid hypo is especially pernicious in its effect on these areas.

Since writing my first paper, which was published in the *New York Medical Journal* in Sept., I have had the opportunity of observing several more cases of this intractable form of the disease and I believe that the cause for this persistence is an irritation of the trophic nerves of the skin. The trophic nerves govern the nourishment of the skin and when these tiny filaments are destroyed or irritated their function is disturbed and we get a catarrhal condition of the skin the relief of which depends upon the revitalization of the tissues. Such a condition is noticed in burns from the X-ray lamp, but of course, more chronic and vastly more serious, as we have so often seen in those cases which finally terminate in the development of cancerous changes in the devitalized tissues.

Now just a few words about prevention before we take up the treatment of the disease. If metol has the slightest deleterious effect upon your skin, give it up and throw away what you have left. Don't give it away; throw it away. Rubber gloves and finger-cots are awkward, expensive and short lived. If they should happen to leak, they are worse than useless. If you have metol poisoning at present, don't wear rubber gloves or finger-cots for any length of time since the sweating which the rubber causes macerates the skin and makes things worse. Heavy oils, lanolin, and such products are safe and serve to protect the skin nicely but are disastrous to the prints. I have found the best protective to be a saturated solution of paraffin in benzine. Dip the fingers into the solution before handling the metol in any form. And lastly, if the manufacturers continue to exploit the drug in their formulæ and preparations, let them be a little more strenuous in their warning to the amateur; or, better still, find a substitute. I know how splendid metol is as an all-around developer; when I gave it up

finally I thought I could never get results again, but amidol is quite as good, to my mind, and edinol and ortol combine almost as well with hydrochinon to make our universal developer.

And now to treatment. In *Cramer's Manual* a page is devoted to the treatment of metol poisoning and they suggest the use of internal medication as well as external applications. I have never found the necessity of using any internal medication in the cases which I have been called upon to treat. The salve which they recommend is undoubtedly a good one in the chronic form of the disease but is a trifle strong for even this stage. When seen in the early stages, it is best to adopt the use of some soothing, astringent lotion or ointment such as the following:

℞ Acid carbolic	gr. 40	or ℞ Calomel	gr. 10
Powdered calamin	gr. 60	Acid carbolic	gr. 10
Zinc oxide	dr. 2	Ointment of rose water.....	oz. 1
Glycerin	dr. 2		
Lime water	oz. 1		
Rose water	q. s. ad. oz. 4		

The lotion may be applied during the day and the salve by night, covering the parts with a little absorbent cotton and a light bandage or glove-finger. When the disease arrives at the chronic form, where the skin peels off and a denuded area exists, the use of a soothing ointment is recommended.

℞ Acid salicylic	gr. 15	or ℞ Ichthyol	dr. 1
Acid boric	dr. 1	Boric acid	dr. 1
Powdered starch	dr. 2	Zinc oxidi	dr. ½
Zinc oxide	dr. 1	Aristol	dr. ½
Petrolatum	oz. 1	Petrolatum	oz. 1

If cracks form on the finger ends or the skin remains rough and scaly, use one of the above salves at night, wash off in the morning and after careful drying apply *flexible* collodion with a small camel's hair brush. The collodion serves as a thorough protective during the day and allows one to dispense with bandages, glove-fingers, etc. At night a little ether will remove the collodion preparatory to applying the salve. I have seen many chronic cases heal nicely under flexible collodion alone. Do not apply the collodion too thickly lest it cracks and the cracks extend into the skin. Always wash off one layer with ether before applying in order to prevent cracking later.





THE EDGE OF THE CLIFF

(Copyright 1908.)

F. I. Monsen.

THE VALUES OF GOLD, PLATINUM AND SULPHUR AS TONING AGENTS.

BY A. J. JARMAN.



FOR many years past the toning of photographic prints that have been made by the printing out process, with various solutions of chloride of gold, has been universal. It should be clearly understood that the toning of a paper print with gold is in no way like the gilding process that was used in aiding the permanency of the Daguerreotype. When a solution of hyposulphite of soda and chloride of gold is used as a bath, and a metal plate is inserted, a deposit of metallic gold takes place upon the metal by electric action, which is in reality, *plating* the metal, as in the case of the Daguerreotype. The process of toning to-day with either the salts of gold or platinum, is a process of substitution, where for every three atoms of silver removed from the image, an atom of gold takes its place. From this it will be easily seen that the permanency of the image is aided by the gold, at the same time the color of the image changes to a tint that is more agreeable to the eye. So the use of gold is two-fold. It aids in giving permanency, and producing a tonal value, thus making a picture more acceptable from an artistic point of view.

Toning photographic prints can be carried out with other metals, besides gold. The salts of platinum, uranium, copper, and palladium can be used. The salt mostly used besides gold chloride is the chloroplatinite of potassium. The ordinary chloride of platinum can be used, but it does not act so rapidly as the chloroplatinite of potassium. In the early seventies, the salts of platinum began to be largely used for the toning of albumen paper prints, which assumed a beautiful velvety brown black color. No doubt its use would have continued, but for the introduction at that period of the platinotype by hot development. Both blue blacks and brown blacks could be readily obtained upon albumen paper by the use of chloride of platinum as a toning agent.

Regarding the value of platinum as a toning agent, the permanency of which would scarcely be questioned, there are many instances where a platinum-toned image has faded in the process of time in a like manner as a gold-toned image has faded. Even where the print has been toned both in a solution of gold, as well as platinum, there are plenty of every day instances where these pictures are constantly fading, although the print itself may not be exposed to the direct action of the atmosphere.

One of the causes of these prints fading and changing considerably in color, is due to the fact that a trace of hyposulphite of silver has been allowed to remain in the body of the paper through imperfect fixing and imperfect washing.

Some of the finest prints made upon various printing out papers which withstand the test of time, have been made permanent by the process of double

fixing. Portraits made by direct printing upon porcelain have shown this in a marked degree. In other instances, there can be no doubt about the action of rapid toning being the cause of change of color, and fading. Take for example a print made upon the modern collodion papers. Push the toning by increasing the quantity of chloride of gold, in the toning bath; rapid toning will take place after washing, retone in a solution of platinum, fix and wash as usual. The chances are a hundred to one that every print so treated will turn to a lemon yellow within a week or two, sometimes in a few days.

The cause appears to be due to a very light surface toning, leaving the organic silver image within the film only partly converted, hence the silver hyposulphite is formed in a greater quantity than would have been the case if the toning had been carried out at a slower rate, which would have enabled the film to have become thoroughly permeated with the gold solution, thus giving an image of a more stable character.

In the combined toning solution, the action of liberated sulphur comes into play as well as a small action of the gold chloride. In fact in many instances the sulphur has more to do with the toning of the image than the gold, so much so, that this action has led to the use of a sulphur compound for the toning of the image in place of either gold or platinum.

Recently the writer made some trials with the modern gelatine printing out paper and collodion coated paper as well. A specimen print upon Kresco and Aristo accompany this article to bear out the statement as to the use of sulphur for toning. In this case, the sulphur actually combines with the organic silver image to produce sulphide of silver which should make the image as permanent as either gold or platinum, because when sulphide of silver is actually found, there is no free silver or organic silver left for the sulphur in the atmosphere to act upon, although the color does not quite equal many of the tones obtained by the use of salts of gold and platinum. There are many reasons to regard these sulphur toned pictures as permanent. Prints toned by the sulphur method must be made very much deeper than those that are printed for ordinary toning.

TONING WITH SULPHUR.

When the prints are ready, wash them well in several changes of water, allow five minutes to soak between each washing, then fix them in a bath of hyposulphite of soda, marking 20 on the hydrometer.

Ten minutes will be required for fixing. When fixed, wash the prints well for about five minutes, then tone in the following solution, which should be carried out away from the darkroom.

Sulphide of ammonium	5 drops
Cold water	20 ounces

Place the prints one by one into this mixture, turn them over repeatedly, and watch the color. The prints will lighten up considerably, and the color will assume first a rich brown, then a purple brown. All that is necessary now will be to wash them well in running water for half an hour when the prints will be fit to dry off, or mount as desired.

Aristo platino paper treated in this manner will give a very rich brown tone, in many cases approaching a true sepia, which in the case of many landscapes and marine views, the color is very pleasing in effect. Monosulphide of sodium should have the same effect, and not be offensive in smell. The above formula has been used, and proved to be effective.

A NEW WAY OF SUNNING PRINTS.

BY G. W. MOFFITT.

IT frequently happens that a print contains some small highlights which detract materially from the pictorial value. Especially is this true in landscape work.

The writer has adopted the following method of removing them from prints on printing-out papers, and for speed and ease of operation has never seen its equal. All that is needed is a good reading glass about $2\frac{1}{2}$ inches in diameter. Several cardboard disks should be cut with central, circular openings of various sizes. These disks should just fit inside the metal band around the lens. In short, provide the lens with a set of diaphragms. A circular hole about $1\frac{1}{2}$ inches in diameter is then cut in a sheet of cardboard. The purpose of this cardboard is to protect the rest of the print while a portion is being sunned down.

The print is placed behind the card so that the offending highlight is exposed through the hole. Subdued sunlight is then focused on the spot with the reading glass. The action is rapid, but may be controlled by using the proper diaphragm. Since the lens is larger than the hole in the protecting cardboard, that portion of the print which is exposed will not be injured for the light is concentrated at one point.

With little practise one can work in direct sunlight, and by simply moving the lens a little nearer the paper the sharp pointed pencil of light may be made so soft that cloud effects are possible.



THE NATIONAL GAME.

Robert W. Tobbs.



ZUNI WOMAN DECORATING POTTERY.

(Copyright 1908.)

F. I. Monsen.

THE "THAMES" ONE PLATE COLOR PHOTOGRAPHY.

BY H. ESSENHIGH CORKE, F. R. P. S.



FOR many years it has been the aim of all photographers to be able to take direct photographs in natural colors.

About eighteen months ago Messrs. Lumière, of Lyons, the distinguished French photographic manufacturers and inventors, startled the world by the production of their wonderful plate, named the "Autochrome," by means of which photographers could attain their desires.

The method they adopted and invented was as is now well known to spread very small starch grains over the plate. These grains had been specially dyed with three *primary colors*, orange-red, green, and blue violet.

The curious feature of their invention was the fact that these starch grains were spread upon the plate quite indiscriminately with no attempt at a regular pattern.

Therefore the color effect was only possible by reason of their very microscopic size, the actual size of the grains varies a little but on an average I have found about 1,536,000 starch grains to each square inch.

The actual theory of a one-plate color process is of course by no means new, it being many years ago that De Haeron introduced the theory of making a glass with a regular pattern of the three primary colors.

And also such a screen was actually made by Joly, whose results proved the success of the theory.

The only difficulty that has been experienced was the fact that these screens had to be very carefully ruled by hand and necessarily the expense incurred has prohibited them being made and sold for general commercial use.

Since those times many inventors have tried to produce a similar screen which could be mechanically made, but although very many patents have been granted, none of them have until just recently been successfully made and actually placed upon the photographic market so that they may be purchased by any photographer in the usual manner.

Great hopes were advanced and entertained about a year ago, that the American Warner Power process would soon be commercially purchasable, but for some reason this hope was disappointed.

The first regular grain screen plate which has reached this state is the "Thames Color Plate."

The writer has been fortunate in being one of the very first photographers who has been able to experiment with this product and the following notes are given from a purely practical and disinterested practise of the most fascinating process during the past few weeks.

As at present the Autochrome must be taken as the only standard for comparisons, all the comparative notes will refer to Messrs. Lumière's Autochrome Color Plate.

The first point of difference is that whereas the color screen of an Autochrome is composed of an irregular grain the Thames is an adaptation of the original theory and the colors are applied to the screen plate in a very wonderfully designed regular geometrical pattern.

This pattern consists of a series of red and green dots arranged in diagonal lines and of such a size and circular shape that the regular spaces between the dots, which are (the spaces) filled up with blue, are exactly equal in their total area to the size of either of the other colored dots.

Thus the three primary colors completely cover the screen plate in equal proportions, and all the light that reaches the sensitive plate must necessarily pass through this screen.

Another point of difference is that whereas in an Autochrome the photographic emulsion is spread upon the top of the color screen and upon the same piece of glass, whilst the Thames photographic plate is quite separate, and is in reality nothing more than an ordinary gelatine dry plate, specially sensitized and rendered panchromatic.

It is therefore much less liable to damage during the various operations than the very delicate film of the Autochrome, and can in fact be handled with no more than the ordinary care.

The size of the dots or circles of the Thames Screen is very different to the size of the starch grains of an Autochrome.

By microscopical examinations I estimate that the size of the Thames dot is about eighty times larger than the Autochrome grain.

But as the Thames dots are, as I have said, arranged in a geometrical pattern, the grain of the finished transparency is not as may be expected very apparent.

The results as far as this grain is concerned, look just about like a halftone block illustration, made with what the block maker calls a 150 line screen, that is to say there are about 150 lines to the inch.



FAST FRIENDS.

Chas. Reid.

Viewed by the naked eye at a distance of anything more than about six or eight inches from the eye this grain is invisible.

The method of using the Thames plate is also somewhat different to using an Autochrome.

The color screen is first placed in the dark slide (in daylight) with its glass side towards the lens.

Then in the darkroom, in total darkness (because of the plate's sensitiveness to all colors) the dry plate is laid in contact with the color screen, film to film.

The exposure is then made in the ordinary way, using a special compensating yellow filter the same as for Autochromes.

The Thames compensating filter is not of such a deep color as the Autochrome filter and thus helps the Thames plate to its greater degree of rapidity.

The speed of the Thames*plate is given by the makers as H. & D. 12, and in practice I find that this is about correct.

Just as in Autochrome work correct exposure is essential for good results so also with Thames Plates, should the light be carefully measured and the correct exposure given.

Especially should over-exposure be guarded against.

After exposing the dry plate only is developed for three minutes in equal quantities of the following solutions:

1

Hydroquinone	1/2 oz.
Potassium metabisulphite	1/2 oz.
Water	20 oz.

2

Caustic Potash	1 oz.
Water	20 oz.

For Use, Take Equal Quantities No. 1 and No. 2.

After development the plate is washed under the tap for one minute then placed in a 10% solution of ammonium persulphate for one minute and again washed for one minute.

The following reversing bath is then applied to the plate.

1

Permanganate of Potash.....	36 grains
Water	20 oz.

2

Sulphuric acid	160 minims
Water	20 ozs.

Use equal parts.

When in this solution the plate is taken out into strong light and in about four minutes the original negative image will have reversed and a positive image obtained.

The plate must be washed to clear it of the permanganate stain and then redeveloped in the following solution.

Sulphite of soda	1/4 oz.
Water	10 ozs.

to 2 ozs. of above add 6 grains amidol and a few drops 10% bromide of potassium.

In this solution the image will intensify and the developing action must be stopped as soon as the image is dense enough.

Due allowance must be made for a considerable loss of density in the next solution which is the fixing bath composed of

Hypo	4 ozs.
Water	1 pint

Allow the plate to fix as usual then well wash and dry just as for ordinary plates.

When perfectly dry the plate is again placed in contact with the color screen.

Then when the correct registration is obtained we shall have a transparency in natural colors.

The registration is not at all a difficult operation.

When the screen and plate are moved about upon each other in opposite directions a rather pretty prismatic effect is obtained.

We must keep them moving until we get an even color all over and one of the objects of the picture to either its correct color or its direct compliment.

Then the slightest movement in either an upright or a horizontal direction will bring all the colors correct..

The color screen and plate are then bound together like lantern slides and our result is complete.

There is no difficulty in obtaining good results if these instruction are adhered to.

The colors in Thames Plates are much more clean and transparent than those of an Autochrome, and the plates being much faster renders the process very suitable for portrait work.

The crux of all such mechanical screen processes is of course the correct manufacture of the screen and the Thames Plate Co. are to be complimented upon the fact that on the whole they have overcome this difficulty.

In the majority of cases which have come under my notice and I have had considerable practice with them the screens were good.

One or two cases occurred in which there was a slight unevenness but I do not think this will occur again as they have informed me that they have now greatly improved their method of manufacture.

I would advise all who have used the Autochrome Process to give this new process a trial and I do not think that the small expense they will incur of 2/6 for a box of 1/4 plates will be regretted even if the results of their first trials are not a success.

There are numerous interesting questions and applications of this process which suggests themselves but these I will deal with in a future paper.

SIMPLE PLATE BACKING.

BY W. S. DAVIS.



WHILE it has long been an undisputed fact that backed or "non-halation" plates give better gradation of tone and detail in contrasty subjects than the ordinary kind, and also allow greater latitude in exposure on all subjects, it is equally true that the majority of photographers, both amateur and professional, continue to use the ordinary kind, even on those subjects which they know could be secured better on backed plates, due no doubt to the fact that most people dislike to go to the trouble of backing their plates as it is usually a mussy operation when paste or liquid backing is used, to say nothing of the inconvenience of drying the plates without fogging after they are backed. Of course there are the double-coated "non-halation" plates, which give good results, nevertheless there are many who do not like to pay the extra price asked, which probably accounts for their not being more generally used, although another point in favor of home backing is the freedom it gives one in the choice of any of the regular grades of plates, so having mentioned some of the drawbacks as well as the advantages of backing I take the liberty of calling attention to a simple method which is very effective, and that is the application of gummed paper to the back of the plate, for while the idea is far from new, it does not seem to be so generally known, especially in this country, as in my opinion it deserves to be. Such a backing was on the market here some years ago but as I don't think it can be obtained now, I will describe the preparation of a similar paper, the method being very simple.



CUXHAVEN, NEAR HAMBURG.

(Taken from steamer Pennsylvania.)

Mrs. Ad. Dohmeyer.

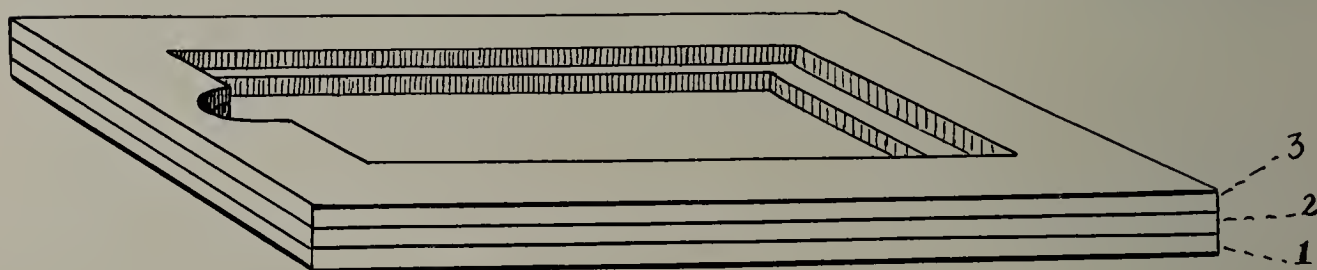
Some sheets of black or red paper such as plates and paper are wrapped in should be cut about one-eighth of an inch smaller all around than the size of plates they are to be applied to, the object of cutting them a little smaller being to allow for expansion when they are dampened previous to attaching to a plate. The paper is then thinly and evenly coated with the following solution:

Water	1 oz.
Gum arabic	3 drs.
Powdered Burnt Sienna or Umber	½ dr.

The color should be well ground or mixed with the gum solution. Should one desire to keep the mixture a few drops of carbolic acid may be added.

If preferred, ordinary mucilage may be thinned with water and the powder color added to it, as exact proportions are not important.

The backing can be applied much more conveniently by the use of a simple backing-frame to hold the plate, such as is shown in the accompanying sketch.



Three sheets of cardboard only are used in making it and they should be an inch or two larger all around than the size plates the frame is to hold. In sheet No. 2 an opening is cut about one-eighth inch smaller all around than size of plate. This sheet is pasted or glued to No. 1. Then in No. 3 an opening is made just large enough to take in the plate and a small cut out made at one end, as shown, for convenience in removing the plate, and this in turn is fastened to No. 2. As will be seen, this permits the plates being placed face down in frame without danger of injury to the film, as the edges of the plate rest upon the rabbets formed by the middle sheet of cardboard.

To back a plate, it is only necessary to moisten a sheet of the gummed paper with water, lay the plate face down in the frame and apply the paper to the back, rubbing down well to exclude air bubbles, (which would of course injure its effectiveness) a mounting roller or squeegee being the best tool for the purpose.

If desired, the gum mixture can be kept in a wide mouthed bottle, and the paper coated with it just before use in place of using clear water.

As the paper does not require to be very damp the plates can be placed in the holders at once, which does away with the "bugbear" of drying first.

In regard to developing the plates; while the backing may easily be removed before development by wetting it, I may say that personally I prefer to leave it on as I develop my plates by timing, in the Davis Daylight Developing Machine. After the plates are developed and rinsed I remove in daylight from machine, strip off the backing-paper and place in fixing-bath. By removing the paper before plates go into the hypo it may be recoated and used

several times, and as the coloring matter used has no staining action on the film, what little dissolves out in the developer will not affect anything, so the same solution can be used repeatedly as usual.

Although it has nothing to do with the mechanical operation of backing plates, it may not be out of place to refer to the question of whether backing effects the speed of a plate. Some maintain that a plate becomes slower, owing to the backing absorbing the light which passes through the film, but in my opinion backing can not lower the speed, although it is true that a backed plate will give a negative with thinner high lights (the darkest parts of negative) than an unbacked one made under the same conditions on account of the strongest light which penetrates the film being absorbed instead of reflected back to the film as is the case with an unbacked plate. This, however, is not a true test of speed as opacity of the high lights can be obtained only too easily even in cases of extreme under-exposure, so if correct comparison is to be made one should examine the amount of detail contained in the half-tones and shadows, when I believe it will be found that with the same exposure and development the backed plate will contain as much detail as the unbacked one, with the advantage of softer high lights containing more detail and gradation than the latter, making a more harmonious negative.

The greatest advantage of backing, however, is in the fact that a full exposure can be given for the deepest shadows without fear of fogging the strongest lighted portions of the subject or in taking objects made up of sharply contrasting colors one can expose for the more non-actinic colors.



LOCK STEP.

F. C. Price.



ZUNI MOTHER AND CHILD.

F. I. Monsen.



HOPÍ MATRON.

(Copyright 1908.)

F. I. Monsen.

Editorial Notes

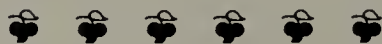


THE new Copyright Law, which was approved March 4th, 1909, and goes into effect on the 1st of July, next, contains two or three sections of interest to photographers. Under its provisions, photographs, prints, pictorial illustrations and photo engravings can all be copyrighted, and the copyright securing under this act shall endure for twenty-eight (28) years from the date of first publication. There is provision also, under certain conditions, for the renewal of a further period of twenty-eight (28) years. In the case of photographs and other works of art, the notice on the original copy to be filed in the library at Washington, may consist of a letter "C" enclosed in a circle, thus: © accompanied by the initial, monogram, mark or symbol of the copyright proprietor, but the full name, in such cases, must appear elsewhere on the article.

The penalty for infringement, in case of a newspaper reproduction of a copyrighted photograph, shall not be less than the sum of Fifty (\$50) Dollars, nor in excess of the sum of Two Hundred (\$200) Dollars.

The fee for registration of a photograph is Fifty (50c) Cents; and, if the photograph is unpublished, the deposit of but one print is required.

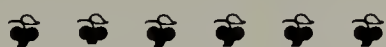
Full directions, to be followed by those desiring to secure copyright, are given in the text of the Act, a complete copy of which can be obtained by addressing Mr. Thorvald Solberg, Registrar of Copyrights, Washington, D. C.



THE Editor of *Camera Craft*, of San Francisco, very courteously takes exception in his issue for March to our comments on the relative value of a dollar and a dollar and a half publication, in an earlier issue and particularly criticises the use of capital letters in our editorial note, though he says some very nice things, too, about our little magazine, and its editor. He is altogether too modest about his own, however, when he says he thinks "it is nearly as good as any photo magazine sold." *Camera Craft* seems to us quite as good as any photographic publication which comes to our table. We should like to know who it was who said to our esteemed contemporary that the editor of this magazine "is one of the finest fellows in the world!"

HENRY BAUSCH, vice-president of the Bausch & Lomb Optical Company died March 2, in Augusta, Ga., where he went early in February in the hope that the milder climate would restore his health, which had been failing for a year.

Mr. Bausch was born in Rochester fifty years ago and was the third son of Mr. and Mrs. J. J. Bausch. He attended the grammar and High School of that city and completed his studies at Cornell University. In 1875 he entered the Bausch & Lomb factory beginning his business career by working at the bench, so learning the business from the ground up. His special interest was in the microscopic and scientific department and to that branch of the business he devoted most of his life. His college training had made him especially adapted to this work.



THE American manufacturers of photographic goods are indeed most generous in affording the photographer high-class and instructive photographic literature gratis. In fact, an excellent working reference library might be composed of these works alone. The Seed, Cramer, Standard, and Hammer Dry Plate Co., all have splendid little manuals. The Eastman Co. has booklets on Enlarging, Flashlight, the Velox book, Tank Development. The Defender Co., the Defender Tipster; the Ansco Co., booklets telling how to handle their films and papers; the Folmer & Schwing Co., a most instructive booklet on focal plane photography; the Bausch & Lomb Optical Co.; the C. P. Goerz Co., Taylor, Taylor & Hobson, and the Gundlach-Manhattan Co., all supply instructive and valuable lens information. In fact, practically every advertiser in our advertising section will supply you gratis with an addition to your reference library well worth writing for.



WE come in contact with a good many amateurs in the course of the year, and it is astonishing how few of them are able to recognize a good picture when they see one, or who possess any knowledge regarding composition, and we also meet a good many who do not know that such knowledge may be acquired from books, but who are laboring under the delusion that the ability to produce or select a picture must be inherent and cannot be cultivated. It is very true that some have the faculty of selection to a certain extent born in them. They frequently produce artistic results, not knowing that they are artistically good but simply because they appealed to them. Any one may learn to judge pictures, any one may learn to compose or analyze a picture, it is simply a matter of study. There are dozens of books on the subject, many of them selling for but a trifle, so if you want to make pictures understandingly it is only a question of study.

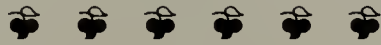


THE SWANS.

J. H. Jost.

WE have had several comments on the decision of our judges in the March Print Competition, "Landscapes with Figures." Some of our critics claiming that the winning prints do not properly come under that classification. The Standard dictionary affords the following definition of the word "landscape": "Landscape, a portion of land or territory which the eye can comprehend in a single view, including mountains, rivers, lakes, and whatever the land contains." From the technical standpoint our judges were right, and as to the artistic side of the question—well, no two sets of judges have ever been known to agree. Our judges are absolutely impartial in their decisions, but are sometimes governed in their choice by the prints that will reproduce the best,—that is if two prints are of equal merit artistically, and one will afford a fair reproduction, and the other is so low in tone as to afford nothing but a smudge when reproduced, the clearer print would receive the award. There are two reasons for this, first, the PHOTOGRAPHIC TIMES is an educator, and if it cannot make its lessons clear by means of its illustrations its value depreciates. Second, poor reproductions detract from the appearance of the publication, and the business office wouldn't stand for that. Do not think that we do not welcome criticism and suggestions, for we do most heartily. The criticisms will always be taken in good part and the suggestions followed whenever practicable.

WE call the attention of our readers to the beautiful swan picture, by J. H. Jost, of Halifax, N. S., which ornaments our cover this month. Another picture of Swans, by the same valued contributor, appears in the body of the magazine. "It is quite hard to get good pictures of these birds"; writes Mr. Jost,—“they were made with the Goerz Dagor lens, 1/250 second exposure, on October 2nd, 1908, at 2 p. m., in bright sun. The Pyro Developer was used.”



WITH the approach of spring, Nature decks herself in a multitude of colors, many of them difficult to record on the sensitive plate or film. The ordinary plate is not sensitive to reds, greens, and yellows, or in but a slight degree, and in consequence, pictures in which these bright colors predominate are anything but correctly rendered as to color, or rather light intensity, values. For successful negative-making a knowledge of orthochromatic photography is necessary, why certain plates and films are sensitive to reds, greens, and yellows, and why the use of a yellow screen or light filter is in many instances necessary. The M. A. Seed Dry Plate Company has issued for free distribution a booklet entitled "Seed From Which Good Pictures Grow," which fully explains the principles of orthochromatic plates and films. There is also a number of the *Photo Miniature* treating on the subject and we advise the earnest study of both by all amateurs.



THE Indian Pictures, by Frederick I. Monsen, which we printed in the March number of THE PHOTOGRAPHIC TIMES, proved so acceptable to our readers, that we decided to procure some additional pictures by Mr. Monsen for reproduction in this number of the magazine, and we take pleasure in presenting them herewith.



LA FOREST DE VIERGES.

A. Gomez Gimeno.

WE want to call your particular attention to the Special Advertising Print Competition for June. In this competition the awards will be made for the best prints that can be used for advertising the products of any of the manufacturers using space in the PHOTOGRAPHIC TIMES. Bear in mind a picture to be useful from the advertising standpoint must be more than a good photograph or a good picture of a beautiful scene or pretty girl. The picture must have some relation or application to the goods sold, must create an interest in or desire for the products advertised. You have a good long list of advertisers to select from. The American Aristo Co.—its famous eagle may afford a suggestion. The Bausch & Lomb Optical Co., with its famous lenses. The Gundlach-Manhattan Optical Co., Korona cameras. Cramer plates, Hammer plates; Williams, Brown & Earle, with their Isostigmat lens, and other products. Burke & James afford a wide field with all their products. The Berlin Aniline works and the Agfa products. Rochester Optical Co., Premos, Premo Film Packs and View cameras. Graflex and Century cameras, Seneca cameras, Taprell & Loomis mounts, Goerz lenses, Voigtlaender lenses. The Seed plates, Ansco film and Cyko paper, and the Eastman Company with their great variety of products. Look through the advertising pages and plan to win. There is a possibility of a market for successful prints with some of the advertisers, and in any event it will be good preliminary training for the big Kodak advertising contest of the Eastman Company.

*SUNLIGHT IN THE WOODS.**William H. Zerbe.*

Monthly Foreign Digest

TRANSLATED BY HENRY F. RAESS.

FORENSIC PHOTOGRAPHY, BY DR. R. A. REISS.

It is now over fifty years since photography was first used to further the ends of justice. In 1854 the police of Lausanne, Switzerland, captured a band of clever thieves, one of whom refused to give his name or any information regarding himself. The district attorney hit upon the happy idea of having a number of Daguerreotypes made of him, and distributing them among the police of the neighboring cities. Through this method his identity was finally established and his record looked up. I have a number of portrait photos of criminals which were made in 1860-64 by the police. In those days a full face was invariably chosen, as it was considered the best for identification, but to-day the importance of the profile is fully recognized. This was the beginning of our modern "rogues gallery."

Photography made but little headway in this direction until 1882. About this time Alphonse Bertillon introduced his method of photographing criminals in connection with his system of measuring. His register now contains about one million cards, each with a full face and profile photo and a record of physical measurement, all so arranged that a particular picture can be rapidly found from a description of his or her appearance. Bertillon has also devised a camera which shows the relative distance and size of objects photographed. This is very useful when photographing the scene of a crime. For instance, a man is found dead in his bed with a shot hole in his temple. Nearby is a revolver which evidently was the weapon used. The hands hang down on either side of the bed, no blood on them. On the right side is a revolver loaded with five cartridges. The door is bolted and the verdict is a suicide. The body is removed and the room put in order. A few days later an anonymous communication is received by the police, it is

hinted that the man was really murdered. The photographs taken at the time the body was discovered are carefully examined, portions are enlarged, and on the floor distinct traces of a hobnailed shoe are seen, the victim did not wear a shoe of this kind. Further investigations prove conclusively that the man was murdered. The door had been bolted from the outside by means of a string. Such photos make the work for the prosecution easy, as they are more readily understood by a jury than verbal descriptions. Another value lies in this kind of photography, thing which cannot be removed, such as foot prints, finger marks, blood spots, and trails, all these may later lead to the capture of the perpetrator. For instance, a thief broke into a desk using a chisel apparently having a nick; the impression made by the tool in the wood work was photographed to natural size. Later a suspected burglar was captured, and in his possession was a chisel, this was photographed and the two pictures enlarged three times, it was then seen that the chisel fitted exactly in the impression on the desk. In another case a defendant charged with murder claimed that his victim feloniously attacked him, that in self-defense he stabbed him, causing his immediate collapse and death. Near the body was a large pool of blood, and between them a trail of blood. The blood spots were then photographed to natural size. They showed distinctly the direction in which the wounded one moved. Examination proved that victim was stabbed at the place where he first stood, and only collapsed while attempting to escape. A thief after breaking into a house found a small iron cash box. This he broke open. On the cover a number of finger marks were visible. These were photographed, and enabled the police to fasten the crime on the right person. A vandal broke into a partly finished house and did considerable damage.

A boy was suspected, but he denied the accusation. In one of the rooms some figures were found made of putty showing finger impressions. These were photographed and compared with those of the suspect, and were found to be identical. A burglar left a cigar box which had been used to carry his tools to the place where a robbery occurred. On examining the inner side of the cover, faint marks were noticed on the paper. On treating the paper with finely powdered graphite, finger marks were seen, and these eventually led to the capture of the thief.

An incendiary attempted to destroy a building which was in the course of erection. The floor near the spot where the fire started was covered with fine sand, this sand showed impressions of hobnailed shoes. These were photographed, and led to the arrest of the criminal on the same day. In the same way marks caused by stockinged feet on a table led to the detection and arrest of a thief.

A burglar breaking into a house stepped on an old and rusted wire screen. His heel sank in, making an impression showing five nails. This was photographed, and on comparing the picture with the heels on the shoes of a suspect, they proved his guilt.

Bodies in which decomposition has started, are often difficult to identify, even by the relatives. This is caused by the color and expression of the face. Prof. Goss of Geneva, in 1896, proposed to inject glycerine into the eyes to replace the moisture found in life. The results are good. The author followed up this method by further treatment of the lips and face. A corpse which had been in the water for some time is "revivified" by treating the eyes with glycerine, injecting vaseline into the lips, then painting them with vermilion and rubbing the skin with tallow. If the eyes are sunk in too much or are missing, glass ones are inserted. After this treatment a head looks very life-like, and photographs made of it are easily recognized by those who knew the person. The photographic plate is more sensitive to differences in color than our eye. Good use can be made of this for detecting things which are invisible to us. To do this, suitable color sensitive plates in connection with color screens and sometimes monochromatic light are used. The body of a woman was found in the sea. On photographing her,

finger impressions became plainly visible on her neck, although nothing could be seen by the unaided eye. It was found later that the woman had quarreled with a man who choked her, but not to death, for she broke away and jumped into the sea and was drowned. A handkerchief said to have been washed with soap and water to remove blood stains was photographed through a blue filter. The eye could see nothing on the cloth, but the negative showed spots. The places corresponding to the spots were cut out of the cloth, treated with proper chemical reagents, and these proved that the spots were caused by blood.

A prominent man committed suicide. On the hearth were found some charred remains of a letter. These were carefully collected and, by the aid of photography, the letter was restored.

The inhabitants of a certain village were kept in a state of terror for some time by a series of fires. At one of these fires a note book almost completely charred was found. On carefully opening the book the charred remains of a waybill was found. This was photographed which enabled one to see the numbers. By the aid of the baggage master the person to whom the bill was issued was found. He acknowledged the ownership of the book, but said he had lost it twenty-one days before the fire and that probably the finder used it for starting the blaze. Thereupon some of the pages were photographed. These showed that the suspect had entered notes with a lead pencil four days before the fire. When confronted with this new evidence, he confessed to having set six fires.

On searching the home of a counterfeiter of French paper money, a number of freshly ground lithographic stones were found. The usual method for restoring old drawings on lithographic stones yielded no results, but by subjecting the stones to a special chemical treatment and photographing them, the author succeeded in recalling the drawings of the bank notes. I shall report later in a special article on this new and important method of detecting in court practice.

A valuable book was borrowed from a public library. On its return, it was examined, and it was found that a copper engraving had been removed, but the abstractor failed to also remove the white tissue paper used as a protection for the picture. No one

could remember just what the picture represented. On photographing the tissue paper through a blue filter, intensifying the plate, and by successively making positives and negatives and intensifying, an image was built up and enabled one to recognize the picture. The ink of the engraving had been slightly absorbed by the tissue paper, and through oxidation produced a yellow coloring of the paper. Nothing was visible to the unaided eye, but the above method brought forth the picture. For a fraudulent purpose, a leaf covered with writing executed with a lead pencil was torn from a note book. The opposite page was blank, and by photographing it with a side light, the writing was made legible.

In a law suit, it was necessary to know the date on which a certain letter had been written. No date was visible in the letter, but on making a photographic examination, it was seen that the letter had originally been dated, but the date erased by careful scraping. But even here, it was possible to establish the date.

In an insurance policy the figure 25 was changed to 101, microphotography in connection with side illumination showed not only that something had been erased, but also the figure 25. The figure 138 in a check was removed by chemical means and replaced by 12,000. The change was so cleverly done that chemical treatment produced no results, but by photographing through appropriate filters, the figure 128 became plainly visible. In a receipt certain words and a whole sentence were said to have been added, but casual examination showed nothing suspicious. On photographing the receipt, the doubtful words were seen to have a different appearance from the others. On close examination it was found that the suspected words had been written with a different ink. The writing in a corner of a bill of lading looked suspicious. On being photographed, it was seen that the words had been retraced with another ink and that certain figures were changed. To the unaided eye the figures had an irregular appearance, but the difference in the ink could not be seen.

It is difficult to say when photography was first used in discovering the invisible,

as forgeries, etc., but probably about 1870, as I have in my collection a photograph of a writing which shows unmistakably that erasures were attempted. Unfortunately, I could not get any further information regarding this interesting photograph, but evidently this method for detecting falsification was used at an earlier date. Every once in a while, we hear of a murderer being caught through having his picture photographed in the eye of his victim. This story originated in 1869 when Dr. Bourion sent to the Academy of Science some plates on which was the retina of a murdered person's eyes and said to show the image of the murderer. The plates were carefully examined, but nothing was seen. The Academy thanked Dr. Bourion for directing their attention to the value of photography to judicial investigations.

—*Photographische Korrespondenz.*

* * *

ETCHED LABELS FOR BOTTLES.

Paper labels are so easily destroyed that any substitute possessing some permanency is welcome. As the solution mentioned below has the property of etching the glass the labels cannot help but be permanent. Two methods may be used for writing the labels. The simplest is to use a quill pen, or the place to be engraved may be covered with wax or paraffin and the design cut in with a pointed tool. The etching fluid is then applied with a brush. Two mixtures should be made, one consisting of equal parts of sodium fluoride, potassium sulphate and water. The sodium fluoride is only slightly soluble in water, but this does not matter. The other mixture contains equal parts of zinc chloride, hydrochloric acid and water. When ready to use mix equal parts. As this mixture attacks glass, porcelain, or any glazed ware and most metals, the vessel should be protected by a lining of wax or paraffin.—*Photographische Industrie*, No. 21.

* * *

"How much do y' charge for photos mister?"

"Fifteen shillings a dozen."

"Gosh, there's only ten of us, how much'll that be?"—*Australian Photographic Journal.*



Among the Camera Clubs

[Officials and other members of Camera Clubs are cordially invited to contribute to this department items of interest concerning their clubs.—THE EDITORS.]

PETERBOROUGH, ONT., CAMERA CLUB.

The Peterborough Camera Club has now completed its fourth month of existence and has now a membership of 31 active members and twenty honorary members and financially is on a sound footing. Its meetings have been fairly well attended. It was organized on September 18th with eight active members which has now increased to thirty-one active members.

The officers elected at the first meeting in October were:

Honorable President His Worship Mayor Rush; Vice-President, The Professional Photographers; President, J. A. Morgan, M. D.; First Vice-President, Mr. R. S. Rose; Second Vice-President, Mrs. A. McCarthy; Secretary-Treasurer, N. A. Howard Moore.

The subject for the next meeting will be either "Pyro Developing," or "Lantern Slide Making," with a demonstration.

N. A. HOWARD-MOORE, *Secretary*.



PORTLAND CAMERA CLUB, PORTLAND, ME.

A series of talks and demonstrations will be held by the Portland Camera Club for men and women, whether members or not, who are interested in that fascinating branch of camera work called pictorial photography. It is intended to make these sufficiently comprehensive to cover the whole ground from properly exposing the plate and developing it to making and finishing the prints.

The first of these was given at the Club's rooms, 571½ Congress street, on Friday evening, February 5th, at 8 o'clock. Other talks will follow during the months of March and April.



STRATFORD CAMERA CLUB, STRATFORD, CONN.

The Stratford Camera Club was organized in April, 1908, with the following officers: Mr. John Graham, Sr., President; Mr. Geo. Stein, Vice-President; Mr. George Appleyard, Treasurer; Mr. John Graham, Jr.,

Secretary. The object of the club is the mutual exchange of ideas on photography and friendly criticism of each other's work, an annual exhibition and exchange exhibitions with other clubs, communications with other clubs solicited, etc. I will write later of our successes to date.

JOHN GRAHAM, JR., *Secretary*.



JAMESTOWN CAMERA CLUB.

The Second Annual Exhibition of the Jamestown Camera Club, was held in the Club's rooms on third floor of the New Gifford Building, Jamestown, New York, on Monday, Tuesday, and Wednesday evenings, March first, second, and third, nineteen hundred nine.

In addition to the club members' own work there were two other distinct features: Inter-Club Contest, in which many of the leading clubs of the United States were represented; and Local Amateurs' Contest, in which amateurs outside of the club membership participated.

A. H. HOOPER, *Secretary*.



CALIFORNIA CAMERA CLUB, SAN FRANCISCO, CAL.

We expect to take possession of our new quarters in the Commercial Building, next to the Emporium, about the middle of March. Our tenancy will begin April 1st.

The club has just let a contract for the erection of the studio on the roof over the assembly room.

The Print Committee takes pleasure in announcing a Print Exhibition of members' work in the new assembly-room, beginning on April 1st. The quarters are admirably adapted to the purposes of an exhibition.

From now on, members should make it a point to secure something worthy of being placed on the walls.

The Outing Committee will shortly announce an outing which will afford opportunities for pictorial results for this Exhibition.

E. G. EISEN, *Secretary*.

THE CAMERA CLUB, NEW YORK.

Mr. Maximilian Toch, F.C.S., gave a lecture March 26, on "The Lumière Color Process Simplified."

Mr. Ferdinand Stark gave a demonstration of "The Carbon Process," Saturday afternoon, March 27th. In the evening Mr. Frederick Monsen gave an informal talk, illustrated with beautiful stereopticon views of the Navajo Indians and the land they live in. Exhibition of Mr. Monsen's pictures was on view from March 25th to April 5th, inclusive.

The regular annual auction is to be held April 15th.



M. A. A. A. CAMERA CLUB, MONTREAL, CAN.

Referring to the notices of our coming exhibition we beg to announce that in addition to the medals offered for open competition, there will be two Bronze Plaques awarded among the club members, as follows:

1. A prize for the best picture submitted by any member of the club.
2. A "Green" prize for the best picture by any member who has not already won an award in this or any other photographic competition.

Should a "Green" member submit what, in the opinion of the judges, is the best picture from the club he will then cease to be eligible for the "Green" prize. On the other hand all pictures by the members will be eligible for competition for the medals.

We have given this matter a good deal of consideration and trust that the decision will meet with approval.

The following clubs have intimated their intention to co-operate with us by sending pictures: Toronto Camera Club, Peterboro' Camera Club, Jamestown (N. Y.) Camera Club, and Toledo Camera Club.

The Jamestown Club invited us to compete in their exhibition (March 1, 2, and 3) with a set of five pictures but owing to difficulties with the Customs over framed work we were unable to accept.

The Peterboro' Club, Peterboro', are to hold an exhibition open to all amateur photographers in Canada, from April 26th to 30th, entries being required to reach Peterboro' on or before April 16th.

C. F. G. JOHNSON, *President*.

CHICAGO CAMERA CLUB, CHICAGO, ILL.

Mr. Jackson, of Jackson & Semmelmeier, Thursday evening, March 18, told us an interesting phase of the camera in Legal Photography. An almost romantic story of a case won by the camera alone—so convincing that the opposing attorney moved the discharge of the case—a strong chain of evidence broken by the lens.

G. C. ELMBERGER, *Secretary*.



CAPITAL CAMERA CLUB, WASHINGTON, D. C.

Feeling that something more must be made of a camera club than a convenient place for members to work and occasionally exchange experiences I obtained the consent of the Board of Directors to extend, through their respective secretaries, an invitation to the officers and members of all the camera clubs in the United States and Canada to visit the Capital Camera Club should any come to Washington to attend the inauguration and, if desired, we would endeavor to furnish what information we could in regard to points of interest in and about the city. It was hoped that this would tend to increase in some measure the cordial feeling between the various clubs and result, in time, in considerable benefit to the fraternity at large, if properly developed. The cordial tone of all the replies received, and there were a good many, was very gratifying. Very few called at the club and it is hoped that many did not visit Washington as the weather conditions on the 3rd and 4th were certain to give a stranger a very poor but justifiable opinion of our climate. Mr. J. H. Thurston, Secretary of the Boston Camera Club, called and we had a most delightful visit; his long experience in club matters and general knowledge enabled him to impart a good deal of valuable information. In future it is hoped that all members of other camera clubs visiting Washington will call at the Capital Camera club where they will be welcome. Most of our members are in the government employ but some one is almost always there after 4.30 P. M. and, if any one who intends calling on us will drop me a card I shall contrive to have some one present.

FRANK W. VEDDER, *Secretary*.

Trade Notes

[Manufacturers and dealers in photographic goods and supplies are urged to send us descriptive circulars of their new products for presentation in this department.—THE EDITORS]

FEATURES OF THE 1909 SENECA CATALOGUE.

The Seneca Camera Mfg. Company have added a $3\frac{1}{4} \times 5\frac{1}{2}$ Camera, Post Card Size, to their reversible back series and they have also added many new equipments to their line possessing Anastigmat lenses and they offer the Optimo and Koilos Shutters, as well as the Volute and Sector, fitted to their equipments.

Another feature is the Multiplying Back which can be fitted to their 8×10 New Improved Seneca View or Camera City View Outfits. With this attachment, it is possible to take almost any number of pictures up to 48 on a 5×7 plate. It is an ideal Penny Picture Outfit.

They also offer a No-Slip Printing Frame. This is a new patented frame just manufactured which absolutely prevents the back from slipping and throwing out of alignment the paper from the negative when being inspected.

They are also offering this year a new patented light-trap in their plateholders which prevents the fogging of plates.

The Seneca Cameras are guaranteed to the limit but only when used with plateholders that bear the stamp, "Manufactured by the Seneca Camera Mfg. Co."

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The "Twin Books of Photography" which the Ansco Company offer to send gratis are a valuable acquisition to anyone interested in the art. In fact, they would be worth having even if the Ansco Company were to charge what it must have cost them to prepare and print the two books mentioned, and they must have cost quite a little for they are gotten up in the usual style in which that company puts out all its literature. The Twins consist of one volume entitled "The Positive of Photography," dealing exhaustively with Cyko and that means that the information is equally applicable to all developing papers of Cyko quality, and "The Negative of Photography," which tells in

very simple words all that is necessary for the amateur to know in making photographs, from the loading of the camera to the finished negative. The Twin Books are in reality, as claimed by the Ansco Company in their advertisements, a complete photographic library which can be held in one hand, or may be conveniently carried in the pocket.

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INGENTO DEVELOPING TANKS.

All the latest improvements in the developing tanks are embodied in the Ingento Model "C," of Burke & James. This tank comprises an outer tank for solutions and a light-tight inner tank, with removable plate rack. The inner tank can be loaded and afterward lowered into the outer tank, and reversed several times during the development. If desired the plates may also be fixed while in the tank, thus making the operation, with the exception of loading, entirely in the daylight. Cut films may also be developed in the Ingento tank by using the Ingento Film Holders.

The tank method of development is now being used by some of the foremost photographers of the country with great success.

☆ ☆ ☆

Burke & James, Chicago, have been appointed trade agents for the best device we have ever seen for loading and unloading plates in daylight. The Primera Plate Magazine, unlike many other devices on the market hitherto, is not cumbersome. On the contrary, including the carrying case, is but $1\frac{7}{8}$ inches thick. It is thoroughly practical, does not scratch the plate and has a capacity of a dozen ordinary plates. It is provided with a non-halation back, which is a permanent fixture of the holder. They are made for all size plates up to 8×10 and sold at a very low price. The device is the invention of W. E. Peters and E. L. Cook, both practical men in photography. A descriptive catalogue will be sent upon request.